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10/535,460	05/19/2005	Jeremy Leonard Clive Ludlow	05-337	7039
20306	7590	05/30/2008		
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP			EXAMINER	
300 S. WACKER DRIVE			PATEL, ISHWARBHAI B	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/535,460	Applicant(s) LUDLOW ET AL.
	Examiner Ishwar (I. B.) Patel	Art Unit 2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 29 April 2008.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) 9-11 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-8,12 and 13 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 19 May 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-166/08)
 Paper No(s)/Mail Date 11/03/05.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application
 6) Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I, claims 1-8 and 12-13 in the reply filed on April 21, 2008 is acknowledged. The traversal is on the ground(s) that the examiner's restriction of the special technical features is too narrow and because both independent claims 1 and 9 share common technical features. The special technical features common to all claims 1-13 are the same. Namely, two insulative layers of ceramic material deposited by thermal spray process and intermediate conductive tracks, all on a structure of conductive material. The examiner has not shown that these special technical features are found in the prior art.

This is not found persuasive because as shown by the various prior art in the action, the method of depositing ceramic by a thermal spray process is old and known in the art.

The requirement is still deemed proper and is therefore made FINAL.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been received and placed of record in the file.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on November 3, 2005 is found to be compliance with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 and is considered.

4.

Specification

5. Applicant is advised to follow the arrangement of the specification / content of the specification shown as follow:

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a

nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Further detail of the content follows:

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

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(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

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(k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

(l) Sequence Listing: See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 2, 6-18, 12 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Richardson (US Patent No. 6,889,557).

Regarding claim 1, 12 and 13, Richardson in figure 4A discloses a structure of electrically conductive material provided with means for the transmission of electrical energy between spaced locations along the structure, comprising a first layer (130) of electrically insulative material deposited on the structure (122), one or more electrically conductive tracks (104, 106) deposited on said first layer, and a second layer (132) of

electrically insulative material deposited over said electrically conductive track(s), said first and second electrically insulative layers each comprising a ceramic material (column 8, line 1-12).

Regarding the limitation “deposited by a thermal spray process”, though Richardson discloses the insulation layers are provided by thermal spraying device (column 8, line 30-39), it is a process limitation in a product claim. Such a process limitation defines the claimed invention over the prior art to the degree that it defines the product itself. A process limitation cannot serve to patentably distinguish the product over the prior art, in the case that the product is same as, or obvious over the prior art. See Product-by-Process in MPEP § 2113 and 2173.05(p) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964, 966 (Fed. Cir. 1985). Richardson discloses the structure. Therefore, Richardson meets the limitation.

Further, regarding claims 12 and 13, how the structure is obtained is a process limitation in the product claim. Such a process limitation defines the claimed invention over the prior art to the degree that it defines the product itself. A process limitation cannot serve to patentably distinguish the product over the prior art, in the case that the product is same as, or obvious over the prior art. See Product-by-Process in MPEP § 2113 and 2173.05(p) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964, 966 (Fed. Cir. 1985). Richardson discloses the structure. Therefore, Richardson meets the limitation.

Regarding claim 2, Richardson further discloses the electrically insulative material in said first and/or second layer is composed predominantly of aluminum oxide (column 8, line 1-12).

Regarding claim 6, Richardson further discloses the structure being a length of pipe (122, column 5, line 47-57).

Regarding claim 7, Richardson further discloses the structure being a pipeline for the conveyance of oil or gas (122, column 5, line 47-57).

Regarding claim 8, Richardson further discloses all the features of claimed invention including a pipeline as applied to claim 7 above. Whether the pipe line is in a well or not does not add any patentable weight to the claim. Further, the limitation "the pipeline in a well" recites the pipeline being used in a well. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987). Richardson discloses the structure. Therefore, Richardson meets the limitation.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson as applied to claim 2 above, and further in view of Zvosec (US Patent Application Publication No. 2003/0207103).

Regarding claim 3, Richardson discloses all the features of the claimed invention as applied to claim 2 above including electrically insulating material in said first and second layer but does not disclose the electrically insulating material includes a proportion of titanium oxide.

However, Richardson further recites that materials other than alumina may be utilized in forming the insulative layers (column 8, line 10-13). Also, use of combination of alumina with titanium oxide is old and known in the art. Zvosec discloses a method for protecting surfaces against corrosive compounds (abstract). Zvosec further recites using a mixture of aluminum oxide and titanium dioxide to have desired corrosion and abrasion resistance (page 3, paragraph 0037).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to provide the structure of Richardson with the insulating material made of alumina which includes a proportion of titanium oxide, from the teaching of Zvosec, in order to have the desired corrosion / abrasion resistance.

Further, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Regarding claims 4 and 5, Richardson discloses all the features of the claimed invention as applied to claim 3 above including electrically insulating material in said first and second layer includes a proportion of titanium oxide but does not disclose the electrically insulative material in said first and/or second layer includes titanium oxide in a proportion of 2-45% by weight, as recited in claim 4 and the electrically insulative material in said first and/or second layer includes titanium oxide in a proportion of 10-15 or 35-45%, as recited in claim 5.

However, the proportion of both the material will be selected based on the desired property of corrosion resistance and abrasion, depending upon the surrounding environment.

Further, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to provide the modified structure of Richardson with the limitations as recited in claims 4 and 5, in order to have desired corrosion / abrasion resistance.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Moore (US Patent No. 6,916,502) discloses a method for coating conduit utilizing thermal spray gun.

Elmoursi (US Patent Application Publication No. 2004/0101620) discloses a method for aluminum metallization to a ceramic substrate.

The examiner requests, in response to this Office Action, support be shown for language added to any original claims and any new claims presented by an amendment. That is, indicate support for newly added claim language by specifically pointing to page(s) and line number(s) in the specification and/or drawing figure(s). This will assist the examiner in prosecuting the application.

Furthermore, when responding to this Office Action, applicant is advised that if a traversal of an obviousness rejection under 35 U.S.C. 103 is presented, a reasoned statement must be included explaining why the applicant believes the Office has erred substantively as to the factual findings or the conclusion of obviousness See 37 CFR 1.111(b).

Additionally, applicant is further advised to clearly point out the patentable novelty which the applicant believes the claims present, in view of the state of the prior art of record or the objections made. Applicant must also show how any new amendments overcome such references or objections, see 37 CFR 1.111(c).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (571) 272 1933. The examiner can normally be reached on M-F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272 1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ibp
May 25, 2008

/Ishwar (I. B.) Patel/
Primary Examiner, Art Unit 2841